ENVIRONMENTAL CHEMISTS

Date of Report: 12/09/98 Date Received: 12/03/98

Project: Metro Self Monitor, PO# M61136

Date Samples Extracted: 12/04/98 Date Extracts Analyzed: 12/08/98

RESULTS FROM THE ANALYSIS OF THE WATER SAMPLE FOR CHROMIUM, COPPER, NICKEL, ZINC USING METHOD 6010

Samples Processed Using Method 3005A

Results Reported as mg/L (ppm)

Sample ID	<u>Chromium</u>	Copper	<u>Nickel</u>	<u>Zinc</u>
M61136	0.44	0.30	0.35	< 0.05
Method Blank	< 0.05	< 0.05	< 0.05	< 0.05

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Date of Report: 12/09/98 Date Received: 12/03/98

Project: Metro Self Monitor, PO# M61136

QUALITY ASSURANCE RESULTS FOR TOTAL METALS BY INDUCTIVELY COUPLED PLASMA (ICP) (METHOD 6010)

Laboratory Code: 812006-01 (Duplicate)

				Relative	
	Reporting	Sample	Duplicate	Percent	Acceptance
Analyte	Units	Result	Result	Difference	Criteria
Chromium	mg/L (ppm)	< 0.05	< 0.05	nm	0-20
Copper	mg/L (ppm)	0.25	0.25	0	0-20
Nickel	mg/L (ppm)	< 0.05	< 0.05	nm	0-20
Zinc	mg/L (ppm)	0.20	0.21	5	0-20

Laboratory Code: 812006-01 (Matrix Spike)

	Reporting	Spike	Sample	% Recov	ery	% Recov	ery	Acceptance		
Analyte	Units	Level	Result	MS		MSD)	Criteria	RPD	1
Chromium	mg/L (ppm)	5	< 0.05	98		97	1 1 1	80-120	1	- 1,
Copper	mg/L (ppm)	5	0.25	97		94		80-120	3	
Nickel	mg/L (ppm)	10	< 0.05	98		98		80-120	0	
Zinc	mg/L (ppm)	5	0.20	102		101		80-120	1	

Laboratory Code: Laboratory Control Sample

	Reporting	Spike %	6 Recover	cy % Recove	ry Acceptance	• • • • • • • • • • • • • • • • • • •		
Analyte	Units	Level	LCS	LCSD	Criteria		RPD	
Chromium	mg/L (ppm)	5	105	105	80-120		0	
Copper	mg/L (ppm)	5	107	108	80-120		1	
Nickel	mg/L (ppm)	10	106	107	80-120		1	
Zinc	mg/L (ppm)	5	106	107	80-120		1	

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

FRIEDMAN & BRUYA, INC. 3012 16th Avenue West Seattle, WA 98119-2029 (206) 285-8282

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SAMPLE CHAIN OF CUSTODY

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City, State, Zip Sead	He wa	78134				
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11/07/98

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D. Charlene Jensen, M.S. Bradley T. Benson, B.S. Kurt Johnson, B.S.

3012 16th Avenue West Seattle, WA 98119-2029 TEL: (206) 285-8282 FAX: (206) 283-5044 e-mail: fbi@isomedia.com

December 9, 1998

DUPLICATE COPY

INVOICE #98ACU1209-2

Accounts Payable Alaskan Copper Works 628 South Hanford St. Seattle, WA 98134

RE: Project Metro Self Monitor, PO# M61136: Results of testing requested by Gerry Thompson for material submitted on December 3, 1998.

1 water sample analyzed for Chromium, Copper, Nickel, and Zinc using Method 6010 @ \$65 per sample \$ 65.00

Amount Due \$ \$65.00

FEDERAL TAX ID(b) (6)

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D. Charlene Jensen, M.S. Bradley T. Benson, B.S. Kurt Johnson, B.S.

3012 16th Avenue West Seattle, WA 98119-2029 TEL: (206) 285-8282 FAX: (206) 283-5044 e-mail: fbi@isomedia.com

December 9, 1998

Gerry Thompson, Project Manager Alaskan Copper Works 628 South Hanford St. Seattle, WA 98134

Dear Mr. Thompson:

Included are the results from the testing of material submitted on December 3, 1998 from your Metro Self Monitor, PO# M61136 project. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

We appreciate this opportunity to be of service to you and hope you will call if you should have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.

Mahuel Marti Project Manager

Enclosures ACU1209R.DOC